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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ORACLE AMERICA, INC.

Plaintiff,

v.

GOOGLE INC.

Defendant.

Case No. CV 10-03561 WHA

**ORACLE'S JURY INSTRUCTION
OBJECTION AND REQUEST FOR
RULING REGARDING
"SYMBOLIC REFERENCE"**

Dept.: Courtroom 8, 19th Floor
Judge: Honorable William H. Alsup

I. REQUEST THAT GOOGLE BE BARRED FROM SUGGESTING THAT A SYMBOLIC REFERENCE CANNOT BE NUMERIC

Oracle requests an order barring Google from offering evidence or argument that a “symbolic reference” cannot be a numeral or index but rather must be string- or character-based.

During Friday’s examination, the Court asked Dr. August, Google’s retained expert, for an example of a symbolic reference. In response, Dr. August at least strongly implied that in order to qualify as a symbolic reference, the reference must include letters in it, *i.e.*, it must be character or string based:

THE COURT: What would be -- where you have the “01” there, give us an example of what would be a symbolic reference, in your opinion.

[colloquy regarding clearing screen omitted]

THE WITNESS: Yeah, so if you actually took f-u-n -- and this f-u-n is taking up three positions. It’s just compressed here horizontally. But if you actually did f- --

THE COURT: I don’t like that f-u-n thing. Use “y” or “x.” Use “y” or “x.”

THE WITNESS: Yeah, so if you have a symbolic reference, let’s say “y” or “x,” and instead of “01” you put a “y” or an “x” in the instruction, then of -- then you would have a symbolic reference --

THE COURT: What would “x1” be?

THE WITNESS: Well, then you would have “x” and a “1.”

THE COURT: No, no. I mean “x1” run together. Is that a symbolic reference?

THE WITNESS: “x1” -- “x1,” if it’s a name for other data that’s not its location then, yes, it would be a symbolic reference.

THE COURT: All right. So are you saying that in the Android instructions, you’ve looked at them and you never find an “x” or a “y” or -- it’s always a number?

THE WITNESS: I’ve looked at every single implementation of the instructions, and I can say with certainty that there is not a symbolic reference in the instructions. You’ll never see “y” or “x” or “z” referring to data by a name other than a memory location, in the instructions themselves.

(RT at 3867:9-3868:22 (August).)

Any implication that a number cannot be a symbolic reference would be inconsistent with the Court's ruling on Google's proposed construction of "symbolic reference" as limited to string- or character-based references. Google's argument made clear that by string- or character-based, it was referring to a sequence of characters, not "number-based references":

Second, as one of the largest software companies in the world, Oracle is certainly familiar with what the words "string" and "character" mean as they relate to software. The Microsoft Press Dictionary cited in Oracle's Opening Brief defines a "string" as a "data structure composed of a sequence of characters, usually representing human-readable text." See Ex. P, Microsoft Press Computer Dictionary 374 (2d ed. 1994). This definition, which uses both "string" and "character," is consistent with the manner in which "symbolic reference" is used throughout the specification, and confirms that Google's more precise construction, which does not encompass number-based references, is correct. See, e.g., '104 patent at Figs. 1A and 1B (showing slot numbers 1 and 2 as "numeric" references, and single character strings "x" and "y" as "symbolic" references).

(ECF 102 at 15.) In its *Markman* Order, the Court flatly rejected Google's proposed language:

Google's proposed modifier "string- or character-based" does not correspond to any terms or concepts appearing in the intrinsic record and will not be read in from the proffered extrinsic sources.

(ECF 137 at 22.)

By its evidence and argument during this trial, however, Google seeks to resuscitate its lost argument and to confuse the jury into thinking that a number cannot be a symbolic reference. The Court should bar Google from doing so.

II. OBJECTION REGARDING INCLUSION OF "DYNAMIC" IN JURY INSTRUCTION

In light of the testimony elicited from Google witnesses on Friday, May 11, 2012, Oracle renews its *Markman* objection to inclusion of the phrase "that is resolved dynamically rather than statically" in the definition of "symbolic reference" in the Court's Draft Jury Instruction No. 11 (ECF 1121 at 5).¹

The '104 patent is clear as to what "static" and "dynamic" mean in the context of the patent. It uses the terms "static" and "dynamic" as *adjectives* to characterize numeric and

¹ Oracle preserves all prior objections made to the jury instructions and verdict form at the charging conference on May 10, 2012, and in briefs filed with the Court before the charging conference addressing proposed jury instructions.

1 symbolic references, respectively: “[T]he main interpretation routine determines if the data
2 reference is *static, i.e., numeric, or dynamic, i.e., symbolic . . .*” (TX 4015 at Col. 5:11-13,
3 emphasis added.)

4 As defined in Instruction No. 11, however, those terms are ambiguous. From Google’s
5 questioning of witnesses, it is apparent that Google intends to exploit that ambiguity. To avoid
6 juror confusion with respect to Instruction No. 11, Oracle requests that the Court consider either
7 (1) removing the phrase “that is resolved dynamically rather than statically,” or (2) clarifying the
8 meaning of “static” and “dynamic” as used in the context of the ’104 patent.²

9 As the Court explained in its Claim Construction Order, numeric (static) references
10 identify a memory location directly, while symbolic (dynamic) references require resolution to a
11 memory location:

12 A ***numeric data reference*** was one that identified data directly by its memory-
13 location address. For example, the command “load the data stored in memory slot
14 2” contains a numeric reference to the data stored in slot 2 (col. 1:26–41). The
15 claimed invention would use a ***static subroutine*** to interpret this numeric data
reference — all it would have to do is go get whatever data is stored in slot 2

16 A ***symbolic data reference***, on the other hand, did not identify data directly by its
17 memory-location address. Instead, a symbolic reference identified data by a
18 “symbolic name” (col. 1:64–67). For example, the command “load the data
19 called y” contains a symbolic reference to the data called y. The claimed
invention would use a ***dynamic subroutine*** to interpret this symbolic reference —
it would have to figure out that “y” means “17” or that “y” means “the data stored
in memory slot 2,” and then get the data called y (col. 5:13–19).

20 (ECF 137 at 20-21, emphasis added.)

21 The patent’s clear adjectival use of “dynamic” and “static” and the Court’s explanation of
22 the terms was not adequately reflected in the actual construction – and hence current jury
23 instruction – of the term “symbolic reference.” Instead, “static” and “dynamic” were turned into
24

25 ² The Court’s Claim Construction Order states: “While this order acknowledges that the
26 parties have a right to the construction of all disputed claim terms by the time the jury instructions
27 are settled, the Court will reserve the authority, on its own motion, to modify the constructions in
28 this order if further evidence — intrinsic or extrinsic — warrants such a modification.” (ECF 137
at 5-6.) Because Google’s arguments are contrary to the Court’s explanation of the terms
“dynamic” and “static” in the Claim Construction Order, clarification is warranted.

adverbs, and “symbolic reference” was construed to mean “a reference that identifies data by a name other than the numeric memory location of the data, *and that is resolved dynamically rather than statically.*” (*Id.* at 22, emphasis added.)

Oracle objected to the inclusion of the last phrase (in italics), noting that confusion might arise over the meaning of “dynamic.” (ECF 132 at 2.) The Court declined to remove that phrase, but explained:

Because this word [“dynamic”] comes directly from the ’104 patent, its use therein will further inform the construction of ‘symbolic reference.’ The word ‘dynamic’ is not being imported from a vacuum.

(ECF 137 at 22.)

The confusion that Oracle feared has now materialized at trial. Google is relying on an interpretation of “dynamic” as referring to *the timing* of symbolic reference resolution, rather than the nature of the symbolic references. To this end, Google questioned Android engineer Andy McFadden as follows:

Q. Is dexopt a static or a dynamic optimization?

A. It performs static optimizations.

Q. Why is it called a static optimization?

A. Because it doesn’t require information that is only available at runtime.

Q. And when you use the word “runtime” in that answer, how are you using it?

A. Uhm, in the sense that – well, there’s different – things happen at different times. So there’s compile time, where the compilers in dx are running. There’s install time, when packages are being downloaded to the device and installed. And then there’s runtime when the application itself is actually executing.

Q. Does dexopt operate when the Dalvik bytecode is actually executing?

A. No.

Q. Is that why you use the term – why you say it’s not a dynamic process?

A. Yes.

(RT at 3762:24-3763:19 (McFadden).) Based on this testimony and Google's arguments, the jury may be misled into believing that dexopt does not infringe the '104 patent because it operates at "install time" rather than "at runtime when the application itself is actually executing."

The term "dynamic" as used in the '104 patent has nothing to do with the *timing* of symbolic reference resolution – *i.e.*, whether it happens at "runtime" or not. Neither the '104 patent nor the Court's Claim Construction Order ascribe a temporal meaning to "dynamic." Instead, "dynamic" refers to the nature of symbolic references – they are "dynamic" in that they must be resolved to identify the memory location of the underlying data based on memory conditions that exist at whatever time the resolution occurs. (TX 4015 at Col. 5:10-31; ECF 137 at 20-21.) Understood in this way, Google's Mr. McFadden admitted that Android's dexopt dynamically resolves symbolic into numerical references:

Q. But dexopt resolves what even you concede are symbolic references?

A. True.

Q. And it resolves them into numerical references?

A. True.

Q. And because that resolution process depends on the conditions actually existing on the handset, when those conditions change by way of a system update, dexopt needs to rerun?

A. True.

Q. And in that sense it's dynamic?

A. No.

Q. Because you disagree with what "dynamic" means?

A. I'm not sure what you mean by "dynamic," but it is possible that we disagree.

Q. If I mean by dynamic, depending on conditions on the handset which can change from time to time, then it is dynamic; true, sir?

A. Okay.

(RT at 3769:8-3770:1 (McFadden).)

To avoid juror confusion over the meaning of "dynamic" in the definition of "symbolic reference," the Court should either:

1 (1) remove the phrase “that is resolved dynamically rather than statically” from the
2 definition of “symbolic reference”; or

3 (2) clarify the construction to conform it to the meaning of “dynamic” and “static” in
4 the Court’s Claim Construction Order by adding one sentence – “Symbolic reference” means “a
5 reference that identifies data by a name other than the numeric memory location of the data, and
6 that is resolved dynamically rather than statically. *“Dynamic” means that the reference requires*
7 *resolution to identify a memory location, while “static” means the reference directly identifies a*
8 *memory location.”*

9 Google cannot claim prejudice from this clarification, as it would conform the meaning of
10 “dynamic” to the Court’s discussion in the Claim Construction Order.

11
12 Dated: May 13, 2012

MORRISON & FOERSTER LLP

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14 By: /s/ Michael A. Jacobs

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